Remarks/Arguments

Claims 1-20 are pending.

Independent claims 1 and 17 have been amended to now more clearly recite that the equation set includes regressive equations of fuel compositions, and that the equation set is solved to determine the values of unknown variables, including the values of the fossil fuel composition.

Claims 1, 2, 17, and 18 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Archer et al. (US 4,969,408). Claims 3-16 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Archer.

Applicant respectfully traverses these rejections.

In the final Office Action, the Examiner asserted that Archer "discloses a system that determines characteristics of fuel by continuously analyzing fuel using a bulk material analyzer for coal to determine compositions and heating values for coal and ash ..., and the use of a boiler model for predicting operating conditions." In other words, Archer takes measurements of the fuel composition and (according to the Examiner) uses a boiler model for predicting operating conditions from the measured fuel composition values. In contrast, independent claims 1 and 17 now more clearly recite that the fossil fuel composition values are solved for using regressive equations, as opposed to being "measured" using a bulk material analyzer, as in Archer.

In summary, Archer fails to teach how to go about solving for fossil fuel composition values using an equation set; rather, Archer relies on a bulk material analyzer to measure fossil fuel compositions. The alleged equation set of Archer is not designed to and cannot be used to obtain fossil fuel composition values as defined in claims 1 and 17.

For the above reasons, Applicant respectfully submits that the Section 102/103 rejections of claims 1-19 are misplaced. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the Section 102(b) and 103(a) rejections of claims 1-19.

Applicant has added new claim 20, which is directed to a computer-implemented online monitoring method for real-time monitoring of a fossil fuel converter apparatus. The method includes the step of solving an equation set using a computer of the online monitoring device to determine values of variables of the equation set, including variables of the fossil fuel composition, that were not measured as operating data and assigned values in step (g). Applicant respectfully submits that Archer fails to disclose these features.

The application is believed to be placed in condition for allowance. Accordingly, reconsideration of the rejections and issuance of a Notice of Allowance are earnestly solicited. In the event any outstanding issue is found to exist, the Examiner is urged to contact the undersigned for expeditious resolution.

Respectfully submitted,

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